Thermo Gamma-Metrics

NO. SE-04.004

11/29/2000 DATE APVD F. Brewer

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OPERATIONAL PROCEDURE

.EAK/CONTAI	NINATION 1	EST CERTIF	ICATE
a & Source Wipe	Installation	Replenishment	Source Removal
_	· •	·	
Bill McGraw Crusher House	_	TestDate: 02-21-	rick Power Plant 02
gencies define a seal or than 0.005 μCi.	ed radiation sour	ce as leaking if rem	ovable contamination is found
if applicable <u>N/A</u>	CPM		
Model No. Z 100 Z 100 Z 100 Z 100 Cs137 X.8 Cs137 X.8	Activity µg 3.30 3.26 12.82 12.90 7.52 7.04	Contar < <u>0.005</u> < <u>0.005</u> < <u>0.005</u> < <u>0.005</u> < <u>0.005</u>	
Probe S/N	V 091827	Cal du	e <u>05-06-02</u> e <u>05-06-02</u> e
sium 137 (Cs-137) Ci	esium Chloride.	·	
sources listed above est with removable A	e have passed the Alpha and Beta/G	e ANSI N5.10-1968 amma surface cont	Appendix B Section B2.1 amination less than 0.005 μCi.
for Alpha and Beta/G er source material, co	Samma contamin ontact the Radiati	ation; Cesium Is ch on Safety Officer.	ecked for Beta/Gamma
x 10 ⁶) = μCί <u>Ward, D.</u> Sig & first initial	nature: DW	ng Nan	Date: <u>02/21/02</u>
	Reliant Energy Ser Bill McGraw Crusher House BMA Ser. # 80003 rencies define a seal or than 0.005 µCi. if applicable N/A Model No. Z 100 Z 100 Z 100 Z 100 Cs137 X.8 Cs137 X.8 Cs137 X.8 Croshium 252 (Cf-252 sium 137 (Cs-137) Croshium 137 (Reliant Energy Services Bill McGraw Crusher House BMA Ser. # 800031 rencies define a sealed radiation sour or than 0.005 µCi. If applicable N/A CPM Model No. Activity µg Z 100 3.30 Z 100 3.26 Z 100 12.82 Z 100 12.82 Z 100 12.90 CS137 X.8 7.52 CS137 X.8 7.52 CS137 X.8 7.04 Probe S/N 94778 Probe S/N 091827 S/N 091827 S/N 137 (Cs-137) Cesium Chloride. If or Alpha and Beta/Gamma contaminar source material, contact the Radiation (106) = µCi Ward, D. Signature;	Bill McGraw Crusher House BMA Ser. # 800031 Idencies define a sealed radiation source as leaking if remains than 0.005 μCi. If applicable N/A CPM Model No. Activity μg Contains C

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OPERATIONAL PROCEDURE

1	LEAK/CONTA	MINATION	EST CERTIFICA	ATE
▼ 6-Month Inspection	n & Source Wipe	Installation	Replenishment	Source Removal
☐ Shipping				
Customers Name: Responsible Person: Location of Source: Device:	Orion Power Mid Bill McGraw Crusher House BMA Ser. # 800		Site: <u>Cheswick I</u> Test Date: <u>08-21-0</u> PO:	Power Plant 01
Currently, regulatory at to be equal to or greate	gencies define a se er than 0.005 μCi.	aled radiation sour	ce as leaking if removal	ble contamination is found
Background Countrate	, if applicable <u>N/A</u>	CPM		
Serial No. <u>Z984</u> <u>Z985</u> <u>Z1514</u> <u>Z1515</u> <u>6141GS</u> <u>6145GS</u>	Model No. Z 100 Z 100 Z 100 Z 100 Cs137 Cs137	Activity µg 3.76 3.72 14.62 14.71 7.61 7.12	Contamina: < <u>0.005</u> < <u>0.005</u> < <u>0.005</u> < <u>0.005</u> < <u>0.005</u>	tion µCi *
Instruments used: Model Survey M Model P G M Pancake Model Certifications:	_ Probe S	X/N <u>B 204 D</u> X/N <u>B 651 Q</u> X/N	Cal due <u>0</u> Cal due <u>0</u> Cal due	<u>6-29-02</u>
Special Form: X Cal X Ce □ Oth	lifornium 252 (Cf-25 sium 137 (Cs-137) ner	Cesium Chloride.	or Cf-Pd alloy.	
Leak Test: X The Wipe 1	sources listed abo Fest with removable	ve have passed the Alpha and Beta/G	e ANSI N5.10-1968 App amma surface contamin	endix B Section B2.1 nation less than 0.005 μCi.
	for Alpha and Beta	/Gamma contamin	ation: Cesium is checke	•
* Note: CPM / (2.22	• •		60 1 0	
Test Performed By: Print last name	Ward, D. S	ignature: <u>Davi</u>	restrail	Date: <u>08/21/01</u>

ThermoGamma-Metrics

Source Wipe Radiation Survey	X Source Rep	IEST CERT	Source Removal C	Installation	
	Orion Power		Site:	Cheswick Power	***
	Jim Pfennigwerth Crusher House		20.		
Source:			PO:		
Performed By:	David J. Ward		Analyzer:		
			Test Date:	03/12/01	

Currently, state and Federally issued radioactive materials licenses define a sealed radiation source as leaking if removable contamination is found to be equal to or greater than 0.005 microcuries,

This is to certify that the following listed and described items have been tested according to American National Standards Institute N5.10-1968 Appendix B Section B2.1, Wipe (Smear) Test. The level(s) of removable contamination observed on the surface of the sources are listed as follows:

Neutron REM Detector	ION Chambar Survey Moter	Portable Countrate Meter	Pancake Probe
Manufacturer:	Manufacturer:	Manufacturer: 8/CZON	Manufacturer: 8/CZON
Sorial #:	Serial #;	Serial #: 13 204 Q	Seriel #: B 65/8
Model #	Model #	Model # SURVEY M	Model # P.G.M

	Source Reference Date :	3/12/01
Californium 252 Source Serial Number	Reference Activity Cf in	Removable Surface Contamination
CF-Z984	4.22	
CF-Z985	4.18	< 0.005
CF-Z 1514		< 0.005
CF-Z 1515	16.42	< 0.005
UF-2 1515	16.52	< 0.005
Oneline 100		
Cesium 137 Source Serial Number	Reference Activity Cs in mCi	Removable Surface Contamination
6141GS	7.68	μCl
6145GS		< 0.005
	7.19	< 0.005

Californium is checked for Alpha, Beta and Gamma contamination and Cesium is checked for Beta and Gamma contamination. From the recorded results, there is no indication of leakage from the source(s).

> Test Performed by: David J. Wa Daniel Vark

ThermoGamma-Metrics

Source Wipe Radiation Survey	X Source Repleni	EST CERT ishment Shipping	Source RemovalOther	Installation	
Customer Name:	Orion Power		Site:	Cheswick Power	\neg
	Bill McGraw			211001110111101101	i
Location of Source:			PO:		
Performed By:	David J. Ward		Analyzer:	31	
			Test Date:	8/8/00	1

Currently, state and Federally issued radioactive materials licenses define a sealed radiation source as leaking if removable contamination is found to be equal to or greater than 0.005 microcuries.

This is to certify that the following listed and described items have been tested according to American National Standards Institute N5.10-1968 Appendix B Section B2.1, Wipe (Smear) Test. The level(s) of removable contamination observed on the surface of the sources are listed as follows:

Neutron REM Detector	ION Chamber Survey Meter	Portable Countrate Meter	Pancake Probe
Manufacturer:	Manufacturer:	Manufacturer: S. E. INTER.	
Serial #:	Serial #:	Serial #: 02740	Manufacturer: Serial #:
Model #	Model #	Model # MONITOR 5	Model #

	Source Reference Date :	8/8/00
Californium 252 Source Serial Number	Reference Activity Cf in µg	Removable Surface Contamination DPM
CF-Z501	1.75	O
CF-Z502	1.72	
CF-Z709	3.36	
CF-Z710	3.22	0
CF-Z984	4.93	Ð
CF-Z985	4.88	0
Cesium 137 Source Serial Number	Reference Activity Cs in mCi	Removable Surface Contamination DPM
6141GS	7.79	O
6145GS	7.29	$\tilde{}$

Californium is checked for Alpha, Beta and Gamma contamination and Cesium is checked for Beta and Gamma contamination. From the recorded results, there is no indication of leakage from the source(s).

Test Performed by: David J. Ward

David Ward

Date: 8/8/00

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Source Wipe Radiation Survey	X Source Replenishment Shipping	TIFICATE Source Removal Other	Installation
Customer Name: RSO:	Duquesne Power and Light Jim Pfennigwerth	Site:	Cheswick Power
Location of Source:	g.	PO:	
Performed By:	David J. Ward	Analyzer:	
		Test Date:	2/4/00

Currently, state and Federally issued radioactive materials licenses define a sealed radiation source as leaking if removable contamination is found to be equal to or greater than 0.005 microcuries.

This is to certify that the following listed and described items have been tested according to American National Standards Institute N5.10-1968 Appendix B Section B2.1, Wipe (Smear) Test. The level(s) of removable contamination observed on the surface of the sources are listed as follows:

Neutron REM Detector	ION Chamber Survey Meter	Portable Countrate Meter	
Manufacturer:		, or table Countrate Meter	Pancake Probe
maratatarer.	Manufacturer:	Manufacturer: S. E. INTER.	Manufacturer:
Serial #;	Serial #:		
Model #		Serial #: 02740	Serial #:
INVOER #	Model#	Model # MONITOR 5	Model #

	Source Reference Date :	2/4/00
Californium 252 Source Serial Number	Reference Activity Cf in µg	Removable Surface Contamination DPM
CF-Z501	2.00	D
CF-Z502	1.96	8
CF-Z709	3.84	
CF-Z710	3.67	Ð
CF-Z984	5.63	0
CF-Z985	5.58	
Cesium 137 Source Serial Number	Reference Activity Cs in mCi	Removable Surface Contamination DPM
6141GS	7.88	OPM C
6145GS	7.38	0

Californium is checked for Alpha, Beta and Gamma contamination and Cesium is checked for Beta and Gamma contamination. From the recorded results, there is no indication of leakage from the source(s).

Test Performed by: David J. Ward-

Date: 2/4/20



	LEAK IEST	CERTIFICATE	
Source Wipe X Radiation Survey	Source Replenishmen Shipping		
Customer Name: Q	rusher BHA	Si	te: Clawik four Plat
Location of Source:	rusher BHA	Chg No	
Performed By: 🕠	An Highy	Analyze Test Dai	er: 3) le: &-5-59
Currently, state and Federa eaking if removable contan	ally issued radioactive mate nination is found to be equi	riolo licanas el 5	
This is to certify that the foll National Standards Institute emovable contamination of	owing listed and described N5.10-1968 Appendix B S bserved on the surface of t	l items have been tested a Section B2.1, Wipe (Smear the sources are listed as fo	ccording to American r) Test. The level(s) of bllows:
Neutron REM Detector	ION Chamber Survey Meter	Portable Countrate Meter	Pancake Probe
Manufacturer.	Manufacturer.	Manufacturer: Radiation Alert	Manufacturer:
Serial #:	Serial #:	Serial #: 02866	Serial #:
Model #	Model #	Model # Monitor 5	Model #
Californium 252 Source Serial Numbel	Source Reference Reference Activit Cf in µg	y Removable Surf	face Contamination
CF-250)	2.28	O.	
CF - 2709	4.37	6	
F - 2984	6.42	Ø	
F - 2502	2.24	ϕ	
(t - 5)10	4.19	Ø	
CF-2985	6.36	1	
Cesium 137 Source Serial Number	Reference Activit		face Contamination
614165	2.47		7 147
614565	7.41		
alifornium is checked for Al ontamination. From the rec	loha. Beta and Gamma co	ndication of leakage from	s checked for Beta and Gar the source(s).





Source Wipe Radiation Survey	LEAK TEST CERT Source Replenishment Shipping	Source RemovalOther	Installation	
	Duquesne Power and Light Jim Pfennigwerth	Site:	Cheswick Power	
Location of Source:	-	PO:		
Performed By:	David J. Ward	Analyzer:	31	
	`	Test Date:	5/5/99	

Currently, state and Federally issued radioactive materials licenses define a sealed radiation source as leaking if removable contamination is found to be equal to or greater than 0.005 microcuries.

This is to certify that the following listed and described items have been tested according to American National Standards Institute N5.10-1968 Appendix B Section B2.1, Wipe (Smear) Test. The level(s) of removable contamination observed on the surface of the sources are listed as follows:

Neutron REM Detector	ION Chamber Survey Meter	Portable Countrate Meter	Pancake Probe	
Manufacturer:	Menufacturer:		- William From	
	was notation of .	Manufacturer: S. E. INTER.	Manufacturer:	
Serial #:	Serial #;	Soriel #: 02740	Soriel #:	
Model #	Model #			
	model #	Model # MONITOR 5	Model #	

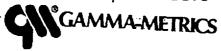
	Source Reference Date :	5/5/99	
Californium 252 Source Serial Number	Reference Activity Cf in µg	Removable Surface Contamination	
CF-Z501	2.44		
CF-Z502	2.39		
CF-Z709	4.67		
CF-Z710	4.48	6	
CF-Z984	6.86	10	
CF-Z985	6.79		
Cesium 137 Source Serial Number	Reference Activity Cs in mCl	Removable Surface Contamination	
6141GS	8.02		
6145GS	7.50	0	

Californium is checked for Alpha, Beta and Gamma contamination and Cesium is checked for Beta and Gamma contamination. From the recorded results, there is no indication of leakage from the source(s).

Test Performed by: David J. Ward

Date:

Test Date:



LEAK TEST CERTIFICATE	LEAK	TEST	CERTIE	ICA	TE
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Source Wipe X Radiation Survey	Shipping	Source RemovalOther	Installation	
	uesne Light Company	Site: Ch	swick Power	Stot: a
Location of Source: Dugi Performed By: Larry	ucone Light L. Taylor	PO: 2		

Currently, state and Federally issued radioactive materials licenses define a sealed radiation source as leaking if removable contamination is found to be equal to or greater than 0.005 microcuries.

This is to certify that the following listed and described items have been tested according to American National Standards Institute N5.10-1968 Appendix B Section B2.1, Wipe (Smear) Test. The level(s) of removable contamination observed on the surface of the sources are listed as follows:

Neutron REM Detector	1011.01		_
	ION Chamber Survey Meter	Portable Countrate Meter	Pancake Probe
Manufacturer:	Manufacturer:	Manufacturer: Radiation Alert	-Manufacturer:
Serial #;	Serial #:	Serial #: 02281	Contract
Model #	Model #	Model # Monitor 5	Serial #:

C-1:4	Source Reference Date :	5-1-98
Californium 252 Source Serial Number	Reference Activity Cf in µg	Removable Surface Contamination DPM
F- 250/	3.18	40.005 uC:
F-2 502 F-2 709	3.12	< 0.005 uC:
c. 7 7/0	6.09	-0,005 uC:
= 2 984	5.83	40,005 MC:
- 7 985	8.85	60.005 uCi
-		
Cesium 137 Source Serial Number	Reference Activity Cs in mCi	Removable Surface Contamination DPM
111565	8.21	40,005 uC:
773 00	9,13	40,005 u.C:

Californium is checked for Alpha, Beta and Gamma contamination and Cesium is checked for Beta and Gamma contamination. From the recorded results, there is no indication of leakage from the source(s).

Test Performed By:

Date: 5-4-98